

What Is Claimed Is:

1. An isolated nucleic acid molecule consisting of a polynucleotide having a nucleotide sequence at least 90% identical to a sequence selected from the group consisting of:

- (a) a nucleotide sequence encoding a polypeptide comprising amino acids from 4 to 65 in SEQ ID NO:2 (Figure 1);
- (b) a nucleotide sequence encoding a polypeptide comprising amino acids from 4 to 70 in SEQ ID NO:2 (Figure 1);
- (c) a nucleotide sequence encoding a polypeptide comprising amino acids from 4 to 75 in SEQ ID NO:2; and
- (d) a nucleotide sequence complementary to any of the nucleotide sequences in (a), (b), or (c);

and optionally, a heterologous polynucleotide sequence.

2. The nucleic acid molecule of claim 1, wherein the selected sequence is (a).

3. The nucleic acid molecule of claim 1, wherein the polynucleotide sequence is at least 95% identical to sequence (a).

4. The nucleic acid molecule of claim 1, wherein the polynucleotide is (a).

5. The nucleic acid molecule of claim 1, wherein the selected sequence is (b).

6. The nucleic acid molecule of claim 1, wherein the polynucleotide sequence is at least 95% identical to sequence (b).

7. The nucleic acid molecule of claim 1, wherein the polynucleotide is (b).

8. The nucleic acid molecule of claim 1, wherein the selected sequence is (c).

9. The nucleic acid molecule of claim 1, wherein the polynucleotide sequence is at least 95% identical to sequence (c).

10. The nucleic acid molecule of claim 1, wherein the polynucleotide is (c).
11. The nucleic acid molecule of claim 1, wherein the selected sequence is (d).
12. The nucleic acid molecule of claim 1, wherein the polynucleotide sequence is at least 95% identical to sequence (d).
13. The nucleic acid molecule of claim 1, wherein the polynucleotide is (d).
14. The nucleic acid molecule of claim 1, wherein the heterologous sequence encodes a polypeptide
15. A method for making a recombinant vector comprising inserting an isolated nucleic acid molecule of claim 1 into a vector.
16. A recombinant vector produced by the method of claim 15.
17. A method of making a recombinant host cell comprising introducing the recombinant vector of claim 16 into a host cell.
18. A recombinant host cell produced by the method of claim 17.
19. A recombinant method for producing a polypeptide, comprising culturing the recombinant host cell of claim 18 under conditions such that the polypeptide encoded by the nucleic acid molecule of claim 1 is expressed, and recovering said polypeptide.
20. An isolated polypeptide having an amino acid sequence at least 90% identical to a sequence selected from the group consisting of:
 - (a) amino acids from 4 to 65 in SEQ ID NO:2 (Figure 1);
 - (b) amino acids from 4 to 70 in SEQ ID NO:2 (Figure 1); and
 - (c) amino acids from 4 to 75 in SEQ ID NO:2;

and optionally, a heterologous polypeptide sequence.

21. An isolated antibody that binds specifically to the polypeptide of claim 20.

22. An isolated antibody that binds specifically to a polypeptide consisting of amino acid residues selected from the group consisting of:

- (a) amino acids 1 to 6 in SEQ ID NO:2;
- (b) amino acids 26 to 31 in SEQ ID NO:2;
- (c) amino acids 43 to 46 in SEQ ID NO:2; and
- (d) amino acids 68 to 74 in SEQ ID NO:2.

23. A method of treating an immunodeficiency or condition associated with an immunodeficiency, comprising administering an effective amount of the polypeptide of claim 20, or the antibody of claim 21 or 22, to a patient in need thereof; wherein said immunodeficiency is a member selected from the group consisting of: severe combined immunodeficiency (SCID)-X linked, SCID-autosomal, adenosine deaminase deficiency (ADA deficiency), X-linked agammaglobulinemia (XLA), Bruton's disease, congenital agammaglobulinemia, X-linked infantile agammaglobulinemia, acquired agammaglobulinemia, adult onset agammaglobulinemia, late-onset agammaglobulinemia, dysgammaglobulinemia, hypogammaglobulinemia, transient hypogammaglobulinemia of infancy, unspecified hypogammaglobulinemia, agammaglobulinemia, common variable immunodeficiency (CVID), Wiskott-Aldrich Syndrome (WAS), X-linked immunodeficiency with hyper IgM, non X-linked immunodeficiency with hyper IgM, selective IgA deficiency, IgG subclass deficiency (with or without IgA deficiency), antibody deficiency with normal or elevated Igs, immunodeficiency with thymoma, Ig heavy chain deletions, kappa chain deficiency, B cell lymphoproliferative disorder (BLPD), selective IgM immunodeficiency, recessive agammaglobulinemia (Swiss type), reticular dysgenesis, neonatal neutropenia, severe congenital leukopenia, thymic aplasia-aplasia or dysplasia with immunodeficiency, ataxia-telangiectasia, short limbed dwarfism, X-linked lymphoproliferative syndrome (XLP), Nezelof syndrome-combined immunodeficiency with Igs, purine nucleoside phosphorylase deficiency (PNP), MHC Class II deficiency (Bare Lymphocyte Syndrome), and severe combined immunodeficiency.

24. A method of diagnosing an immunodeficiency or condition associated with an immunodeficiency, comprising contacting the polypeptide of claim 20, or the antibody of claim 21 or 22, with a biological sample, and assaying for binding to said protein or antibody; wherein said immunodeficiency is a member selected from the group consisting of: severe combined immunodeficiency (SCID)-X linked, SCID-autosomal, adenosine deaminase deficiency (ADA deficiency), X-linked agammaglobulinemia (XLA), Bruton's disease, congenital agammaglobulinemia, X-linked infantile agammaglobulinemia, acquired agammaglobulinemia, adult onset agammaglobulinemia, late-onset agammaglobulinemia, dysgammaglobulinemia, hypogammaglobulinemia, transient hypogammaglobulinemia of infancy, unspecified hypogammaglobulinemia, agammaglobulinemia, common variable immunodeficiency (CVID), Wiskott-Aldrich Syndrome (WAS), X-linked immunodeficiency with hyper IgM, non X-linked immunodeficiency with hyper IgM, selective IgA deficiency, IgG subclass deficiency (with or without IgA deficiency), antibody deficiency with normal or elevated Igs, immunodeficiency with thymoma, Ig heavy chain deletions, kappa chain deficiency, B cell lymphoproliferative disorder (BLPD), selective IgM immunodeficiency, recessive agammaglobulinemia (Swiss type), reticular dysgenesis, neonatal neutropenia, severe congenital leukopenia, thymic aplasia/aplasia or dysplasia with immunodeficiency, ataxia-telangiectasia, short limbed dwarfism, X-linked lymphoproliferative syndrome (XLP), Nezelof syndrome-combined immunodeficiency with Igs, purine nucleoside phosphorylase deficiency (PNP), MHC Class II deficiency (Bare Lymphocyte Syndrome), and severe combined immunodeficiency.

25. A method of treating an autoimmune disease or condition associated with an autoimmune disease, comprising administering an effective amount of the polypeptide of claim 20, to a patient in need thereof; wherein said autoimmune disease is a member selected from the group consisting of: autoimmune hemolytic anemia (including, but not limited to cryoglobulinemia or Coombs positive anemia), autoimmune neonatal thrombocytopenia, idiopathic thrombocytopenia purpura, autoimmunocytopenia, autoimmune neutropenia, hemolytic anemia, antiphospholipid syndrome, dermatitis (e.g. atopic dermatitis), allergic encephalomyelitis, myocarditis, relapsing polychondritis, rheumatic heart disease, glomerulonephritis (e.g. IgA nephropathy), Multiple Sclerosis,

Neuritis, Uveitis Ophthalmia, Polyendocrinopathies, Purpura (e.g., Henloch-Scoenlein purpura), Reiter's Disease, Stiff-Man Syndrome, Autoimmune Pulmonary Inflammation, Guillain-Barre Syndrome, insulin dependent diabetes mellitus, juvenile onset diabetes, and autoimmune inflammatory eye, autoimmune thyroiditis, hypothyroidism (i.e., Hashimoto's thyroiditis, systemic lupus erythematosus, Goodpasture's syndrome, Pemphigus, Receptor autoimmunities such as, for example, (a) Graves' Disease , (b) Myasthenia Gravis, and (c) insulin resistance, autoimmune hemolytic anemia, autoimmune thrombocytopenic purpura , rheumatoid arthritis, gluten-sensitive enteropathy, dense deposit disease, scleroderma with anti-collagen antibodies, mixed connective tissue disease, polymyositis/dermatomyositis, pernicious anemia (Addison's disease), idiopathic Addison's disease, infertility, glomerulonephritis such as primary glomerulonephritis and IgA nephropathy, bullous pemphigoid, Sjogren's syndrome, diabetes mellitus, and adrenergic drug resistance (including adrenergic drug resistance with asthma or cystic fibrosis), chronic active hepatitis, primary biliary cirrhosis, other endocrine gland failure, vitiligo, vasculitis, post-MI, cardiomy syndrome, urticaria, atopic dermatitis, asthma, inflammatory myopathies, and other inflammatory, granulomatous, degenerative, atrophic disorders, and other disorders such as inflammatory skin diseases including psoriasis and sclerosis, inflammatory bowel diseases (such as Crohn's disease and ulcerative colitis), respiratory distress syndrome (including adult respiratory distress syndrome, ARDS), meningitis, encephalitis, colitis, allergic conditions such as eczema and other conditions involving infiltration of T cells and chronic inflammatory responses, atherosclerosis, leukocyte adhesion deficiency, Reynaud's syndrome, and immune responses associated with acute and delayed hypersensitivity mediated by cytokines and T-lymphocytes typically found in tuberculosis, sarcoidosis, granulomatosis and diseases involving leukocyte diapedesis, central nervous system (CNS) inflammatory disorder, multiple organ injury syndrome, antigen-antibody complex mediated diseases, anti-glomerular basement membrane disease, Lambert-Eaton myasthenic syndrome, Beheet disease, giant cell arteritis, immune complex nephritis, IgA nephropathy, IgM polyneuropathies or autoimmune thrombocytopenia etc.

26. A method of diagnosing an autoimmune disease or condition associated with an autoimmune disease, comprising contacting the polypeptide of claim 20 with a biological sample, and assaying for binding to said protein; wherein said autoimmune

disease is a member selected from the group consisting of: autoimmune hemolytic anemia (including, but not limited to cryoglobulinemia or Coombs positive anemia), autoimmune neonatal thrombocytopenia, idiopathic thrombocytopenia purpura, autoimmunocytopenia, autoimmune neutropenia, hemolytic anemia, antiphospholipid syndrome, dermatitis (e.g. atopic dermatitis), allergic encephalomyelitis, myocarditis, relapsing polychondritis, rheumatic heart disease, glomerulonephritis (e.g. IgA nephropathy), Multiple Sclerosis, Neuritis, Uveitis Ophthalmia, Polyendocrinopathies, Purpura (e.g., Henloch-Schoenlein purpura), Reiter's Disease, Stiff-Man Syndrome, Autoimmune Pulmonary Inflammation, Guillain-Barre Syndrome, insulin dependent diabetes mellitus, juvenile onset diabetes, and autoimmune inflammatory eye, autoimmune thyroiditis, hypothyroidism (i.e., Hashimoto's thyroiditis, systemic lupus erythematosus, Goodpasture's syndrome, Pemphigus, Receptor autoimmunities such as, for example, (a) Graves' Disease , (b) Myasthenia Gravis, and (c) insulin resistance, autoimmune hemolytic anemia, autoimmune thrombocytopenic purpura , rheumatoid arthritis, gluten-sensitive enteropathy, dense deposit disease, scleroderma with anti-collagen antibodies, mixed connective tissue disease, polymyositis/dermatomyositis, pernicious anemia (Addison's disease), idiopathic Addison's disease, infertility, glomerulonephritis such as primary glomerulonephritis and IgA nephropathy, bullous pemphigoid, Sjogren's syndrome, diabetes mellitus, and adrenergic drug resistance (including adrenergic drug resistance with asthma or cystic fibrosis), chronic active hepatitis, primary biliary cirrhosis, other endocrine gland failure, vitiligo, vasculitis, post-MI, cardiomyopathy syndrome, urticaria, atopic dermatitis, asthma, inflammatory myopathies, and other inflammatory, granulomatous, degenerative, atrophic disorders, and other disorders such as inflammatory skin diseases including psoriasis and sclerosis, inflammatory bowel diseases (such as Crohn's disease and ulcerative colitis), respiratory distress syndrome (including adult respiratory distress syndrome, ARDS), meningitis, encephalitis, colitis, allergic conditions such as eczema and other conditions involving infiltration of T cells and chronic inflammatory responses, atherosclerosis, leukocyte adhesion deficiency, Reynaud's syndrome, and immune responses associated with acute and delayed hypersensitivity mediated by cytokines and T-lymphocytes typically found in tuberculosis, sarcoidosis, granulomatosis and diseases involving leukocyte diapedesis, central nervous system (CNS) inflammatory disorder, multiple organ injury syndrome, antigen-antibody complex mediated diseases, anti-glomerular basement membrane disease, Lambert-Eaton

myasthenic syndrome, Beheet disease, giant cell arteritis, immune complex nephritis, IgA nephropathy, IgM polyneuropathies or autoimmune thrombocytopenia etc.

27. A method of treating an autoimmune disease or condition associated with an autoimmune disease comprising, administering an effective amount of the antibody of claim 22, to a patient in need thereof; wherein said autoimmune disease is a member selected from the group consisting of: autoimmune hemolytic anemia (including, but not limited to cryoglobulinemia or Coombs positive anemia), autoimmune neonatal thrombocytopenia, idiopathic thrombocytopenia purpura, autoimmunocytopenia, autoimmune neutropenia, hemolytic anemia, antiphospholipid syndrome, dermatitis (e.g. atopic dermatitis), allergic encephalomyelitis, myocarditis, relapsing polychondritis, rheumatic heart disease, glomerulonephritis (e.g. IgA nephropathy), Multiple Sclerosis, Neuritis, Uveitis Ophthalmia, Polyendocrinopathies, Purpura (e.g., Henloch-Scoenlein purpura), Reiter's Disease, Stiff-Man Syndrome, Autoimmune Pulmonary Inflammation, Guillain-Barre Syndrome, insulin dependent diabetes mellitus, juvenile onset diabetes, and autoimmune inflammatory eye, autoimmune thyroiditis, hypothyroidism (i.e., Hashimoto's thyroiditis, systemic lupus erythematosus, Goodpasture's syndrome, Pemphigus, Receptor autoimmunities such as, for example, (a) Graves' Disease , (b) Myasthenia Gravis, and (c) insulin resistance, autoimmune hemolytic anemia, autoimmune thrombocytopenic purpura , rheumatoid arthritis, gluten-sensitive enteropathy, dense deposit disease, scleroderma with anti-collagen antibodies, mixed connective tissue disease, polymyositis/dermatomyositis, pernicious anemia (Addison's disease), idiopathic Addison's disease, infertility, glomerulonephritis such as primary glomerulonephritis and IgA nephropathy, bullous pemphigoid, Sjogren's syndrome, diabetes mellitus, and adrenergic drug resistance (including adrenergic drug resistance with asthma or cystic fibrosis), chronic active hepatitis, primary biliary cirrhosis, other endocrine gland failure, vitiligo, vasculitis, post-MI, cardiomyopathy syndrome, urticaria, atopic dermatitis, asthma, inflammatory myopathies, and other inflammatory, granulomatous, degenerative, atrophic disorders, and other disorders such as inflammatory skin diseases including psoriasis and sclerosis, inflammatory bowel diseases (such as Crohn's disease and ulcerative colitis), respiratory distress syndrome (including adult respiratory distress syndrome, ARDS), meningitis, encephalitis, colitis, allergic conditions such as eczema and other conditions involving infiltration of T cells and chronic

inflammatory responses, atherosclerosis, leukocyte adhesion deficiency, Reynaud's syndrome, and immune responses associated with acute and delayed hypersensitivity mediated by cytokines and T-lymphocytes typically found in tuberculosis, sarcoidosis, granulomatosis and diseases involving leukocyte diapedesis, central nervous system (CNS) inflammatory disorder, multiple organ injury syndrome, antigen-antibody complex mediated diseases, anti-glomerular basement membrane disease, Lambert-Eaton myasthenic syndrome, Beheet disease, giant cell arteritis, immune complex nephritis, IgA nephropathy, IgM polyneuropathies or autoimmune thrombocytopenia etc.

28. A method of diagnosing an autoimmune disease or condition associated with an autoimmune disease, comprising contacting the antibody of claim 22 with a biological sample, and assaying for binding to said antibody, wherein said autoimmune disease is a member selected from the group consisting of: autoimmune hemolytic anemia (including, but not limited to cryoglobulinemia or Coombs positive anemia), autoimmune neonatal thrombocytopenia, idiopathic thrombocytopenia purpura, autoimmunocytopenia, autoimmune neutropenia, hemolytic anemia, antiphospholipid syndrome, dermatitis (e.g. atopic dermatitis), allergic encephalomyelitis, myocarditis, relapsing polychondritis, rheumatic heart disease, glomerulonephritis (e.g. IgA nephropathy), Multiple Sclerosis, Neuritis, Uveitis Ophthalmia, Polyendocrinopathies, Purpura (e.g., Henloch-Scoenlein purpura), Reiter's Disease, Stiff-Man Syndrome, Autoimmune Pulmonary Inflammation, Guillain-Barre Syndrome, insulin dependent diabetes mellitus, juvenile onset diabetes, and autoimmune inflammatory eye, autoimmune thyroiditis, hypothyroidism (i.e., Hashimoto's thyroiditis, systemic lupus erythematosus, Goodpasture's syndrome, Pemphigus, Receptor autoimmunities such as, for example, (a) Graves' Disease , (b) Myasthenia Gravis, and (c) insulin resistance, autoimmune hemolytic anemia, autoimmune thrombocytopenic purpura , rheumatoid arthritis, gluten-sensitive enteropathy, dense deposit disease, scleroderma with anti-collagen antibodies, mixed connective tissue disease, polymyositis/dermatomyositis, pernicious anemia (Addison's disease), idiopathic Addison's disease, infertility, glomerulonephritis such as primary glomerulonephritis and IgA nephropathy, bullous pemphigoid, Sjogren's syndrome, diabetes mellitus, and adrenergic drug resistance (including adrenergic drug resistance with asthma or cystic fibrosis), chronic active hepatitis, primary biliary cirrhosis, other endocrine gland failure, vitiligo, vasculitis, post-MI, cardiomyopathy syndrome, urticaria,

atopic dermatitis, asthma, inflammatory myopathies, and other inflammatory, granulomatous, degenerative, atrophic disorders, and other disorders such as inflammatory skin diseases including psoriasis and sclerosis, inflammatory bowel diseases (such as Crohn's disease and ulcerative colitis), respiratory distress syndrome (including adult respiratory distress syndrome, ARDS), meningitis, encephalitis, colitis, allergic conditions such as eczema and other conditions involving infiltration of T cells and chronic inflammatory responses, atherosclerosis, leukocyte adhesion deficiency, Reynaud's syndrome, and immune responses associated with acute and delayed hypersensitivity mediated by cytokines and T-lymphocytes typically found in tuberculosis, sarcoidosis, granulomatosis and diseases involving leukocyte diapedesis, central nervous system (CNS) inflammatory disorder, multiple organ injury syndrome, antigen-antibody complex mediated diseases, anti-glomerular basement membrane disease, Lambert-Eaton myasthenic syndrome, Beheet disease, giant cell arteritis, immune complex nephritis, IgA nephropathy, IgM polyneuropathies or autoimmune thrombocytopenia etc.

29. A method of increasing B cell proliferation, comprising administering an effective amount of the antibody of claim 22, to a patient in need thereof.

30. A method of increasing immunoglobulin production, comprising administering an effective amount of the antibody of claim 22, to a patient in need thereof.

31. A method of inhibiting B cell proliferation, comprising administering an effective amount of the polypeptide of claim 20 or the antibody of claim 22 to a patient in need thereof.

32. A method of inhibiting immunoglobulin production, comprising administering an effective amount of the polypeptide of claim 20 or the antibody of claim 22, to a patient in need thereof.

33. An isolated nucleic acid molecule consisting of a polynucleotide having a nucleotide sequence at least 90% identical to a sequence selected from the group consisting of:

(a) a nucleotide sequence encoding a polypeptide comprising amino acids from

4 to 65 as encoded by the ATCC deposit having ATCC Accession number PTA-1997;

(b) a nucleotide sequence encoding a polypeptide comprising amino acids from 4 to 70 as encoded by the ATCC deposit having ATCC Accession number PTA-1997;

(c) a nucleotide sequence encoding a polypeptide comprising amino acids from 4 to 75 as encoded by the ATCC deposit having ATCC Accession number PTA-1997; and

(d) a nucleotide sequence complementary to any of the nucleotide sequences in (a), (b), or (c);

and optionally, a heterologous polynucleotide sequence.

34. The nucleic acid molecule of claim 33, wherein the selected sequence is (a).

35. The nucleic acid molecule of claim 33, wherein the polynucleotide sequence is at least 95% identical to sequence (a).

36. The nucleic acid molecule of claim 33, wherein the polynucleotide is (a).

37. The nucleic acid molecule of claim 33, wherein the selected sequence is (b).

38. The nucleic acid molecule of claim 33, wherein the polynucleotide sequence is at least 95% identical to sequence (b).

39. The nucleic acid molecule of claim 33, wherein the polynucleotide is (b).

40. The nucleic acid molecule of claim 33, wherein the selected sequence is (c).

41. The nucleic acid molecule of claim 33, wherein the polynucleotide sequence is at least 95% identical to sequence (c).

42. The nucleic acid molecule of claim 33, wherein the polynucleotide is (c).
43. The nucleic acid molecule of claim 33, wherein the selected sequence is (d).
44. The nucleic acid molecule of claim 33, wherein the polynucleotide sequence is at least 95% identical to sequence (d).
45. The nucleic acid molecule of claim 33, wherein the polynucleotide is (d).
46. The nucleic acid molecule of claim 33, wherein the heterologous sequence encodes a polypeptide
47. A method for making a recombinant vector comprising inserting an isolated nucleic acid molecule of claim 33 into a vector.
48. A recombinant vector produced by the method of claim 47.
49. A method of making a recombinant host cell comprising introducing the recombinant vector of claim 48 into a host cell.
50. A recombinant host cell produced by the method of claim 49.
51. A recombinant method for producing a polypeptide, comprising culturing the recombinant host cell of claim 50 under conditions such that the polypeptide encoded by the nucleic acid molecule of claim 33 is expressed, and recovering said polypeptide.
52. An isolated polypeptide having an amino acid sequence at least 90% identical to a sequence selected from the group consisting of:
- (a) amino acids from 4 to 65 encoded by the ATCC deposit having ATCC Accession number PTA-1997;
 - (b) amino acids from 4 to 70 encoded by the ATCC deposit having ATCC

Accession number PTA-1997; and
(c) amino acids from 4 to 75 encoded by the ATCC deposit having ATCC
Accession number PTA-1997;
and optionally, a heterologous polypeptide sequence.

53. An isolated antibody that binds specifically to the polypeptide of claim 52.

54. An isolated antibody that binds specifically to a polypeptide consisting of
amino acid residues selected from the group consisting of:

- (a) amino acids 1 to 6 encoded by the ATCC deposit having ATCC Accession
number PTA-1997;
- (b) amino acids 26 to 31 encoded by the ATCC deposit having ATCC
Accession number PTA-1997;
- (c) amino acids 43 to 46 encoded by the ATCC deposit having ATCC
Accession number PTA-1997; and
- (d) amino acids 68 to 74 encoded by the ATCC deposit having ATCC
Accession number PTA-1997;

55. A method of treating an immunodeficiency or condition associated with an
immunodeficiency, comprising administering an effective amount of the polypeptide of
claim 52, or the antibody of claim 53 or 54, to a patient in need thereof; wherein said
immunodeficiency is a member selected from the group consisting of: severe combined
immunodeficiency (SCID)-X linked, SCID-autosomal, adenosine deaminase deficiency
(ADA deficiency), X-linked agammaglobulinemia (XLA), Bruton's disease, congenital
agammaglobulinemia, X-linked infantile agammaglobulinemia, acquired
agammaglobulinemia, adult onset agammaglobulinemia, late-onset agammaglobulinemia,
dysgammaglobulinemia, hypogammaglobulinemia, transient hypogammaglobulinemia of
infancy, unspecified hypogammaglobulinemia, agammaglobulinemia, common variable
immunodeficiency (CVID), Wiskott-Aldrich Syndrome (WAS), X-linked
immunodeficiency with hyper IgM, non X-linked immunodeficiency with hyper IgM,
selective IgA deficiency, IgG subclass deficiency (with or without IgA deficiency),
antibody deficiency with normal or elevated Igs, immunodeficiency with thymoma, Ig
heavy chain deletions, kappa chain deficiency, B cell lymphoproliferative disorder

(BLPD), selective IgM immunodeficiency, recessive agammaglobulinemia (Swiss type), reticular dysgenesis, neonatal neutropenia, severe congenital leukopenia, thymic alymphoplasia-aplasia or dysplasia with immunodeficiency, ataxia-telangiectasia, short limbed dwarfism, X-linked lymphoproliferative syndrome (XLP), Nezelof syndrome-combined immunodeficiency with Igs, purine nucleoside phosphorylase deficiency (PNP), MHC Class II deficiency (Bare Lymphocyte Syndrome), and severe combined immunodeficiency.

56. A method of diagnosing an immunodeficiency or condition associated with an immunodeficiency, comprising contacting the polypeptide of claim 52, or the antibody of claim 53 or 54, with a biological sample, and assaying for binding to said protein or antibody; wherein said immunodeficiency is a member selected from the group consisting of: severe combined immunodeficiency (SCID)-X linked, SCID-autosomal, adenosine deaminase deficiency (ADA deficiency), X-linked agammaglobulinemia (XLA), Bruton's disease, congenital agammaglobulinemia, X-linked infantile agammaglobulinemia, acquired agammaglobulinemia, adult onset agammaglobulinemia, late-onset agammaglobulinemia, dysgammaglobulinemia, hypogammaglobulinemia, transient hypogammaglobulinemia of infancy, unspecified hypogammaglobulinemia, agammaglobulinemia, common variable immunodeficiency (CVID), Wiskott-Aldrich Syndrome (WAS), X-linked immunodeficiency with hyper IgM, non X-linked immunodeficiency with hyper IgM, selective IgA deficiency, IgG subclass deficiency (with or without IgA deficiency), antibody deficiency with normal or elevated Igs, immunodeficiency with thymoma, Ig heavy chain deletions, kappa chain deficiency, B cell lymphoproliferative disorder (BLPD), selective IgM immunodeficiency, recessive agammaglobulinemia (Swiss type), reticular dysgenesis, neonatal neutropenia, severe congenital leukopenia, thymic alymphoplasia-aplasia or dysplasia with immunodeficiency, ataxia-telangiectasia, short limbed dwarfism, X-linked lymphoproliferative syndrome (XLP), Nezelof syndrome-combined immunodeficiency with Igs, purine nucleoside phosphorylase deficiency (PNP), MHC Class II deficiency (Bare Lymphocyte Syndrome), and severe combined immunodeficiency.

57. A method of treating an autoimmune disease or condition associated with an autoimmune disease, comprising administering an effective amount of the polypeptide

of claim 52, to a patient in need thereof; wherein said autoimmune disease is a member selected from the group consisting of: autoimmune hemolytic anemia (including, but not limited to cryoglobulinemia or Coombs positive anemia), autoimmune neonatal thrombocytopenia, idiopathic thrombocytopenia purpura, autoimmunocytopenia, autoimmune neutropenia, hemolytic anemia, antiphospholipid syndrome, dermatitis (e.g. atopic dermatitis), allergic encephalomyelitis, myocarditis, relapsing polychondritis, rheumatic heart disease, glomerulonephritis (e.g, IgA nephropathy), Multiple Sclerosis, Neuritis, Uveitis Ophthalmia, Polyendocrinopathies, Purpura (e.g., Henloch-Scoenlein purpura), Reiter's Disease, Stiff-Man Syndrome, Autoimmune Pulmonary Inflammation, Guillain-Barre Syndrome, insulin dependent diabetes mellitus, juvenile onset diabetes, and autoimmune inflammatory eye, autoimmune thyroiditis, hypothyroidism (i.e., Hashimoto's thyroiditis, systemic lupus erythematosus, Goodpasture's syndrome, Pemphigus, Receptor autoimmunities such as, for example, (a) Graves' Disease , (b) Myasthenia Gravis, and (c) insulin resistance, autoimmune hemolytic anemia, autoimmune thrombocytopenic purpura , rheumatoid arthritis, gluten-sensitive enteropathy, dense deposit disease, scleroderma with anti-collagen antibodies, mixed connective tissue disease, polymyositis/dermatomyositis, pernicious anemia (Addison's disease), idiopathic Addison's disease, infertility, glomerulonephritis such as primary glomerulonephritis and IgA nephropathy, bullous pemphigoid, Sjogren's syndrome, diabetes mellitus, and adrenergic drug resistance (including adrenergic drug resistance with asthma or cystic fibrosis), chronic active hepatitis, primary biliary cirrhosis, other endocrine gland failure, vitiligo, vasculitis, post-MI, cardiomyopathy syndrome, urticaria, atopic dermatitis, asthma, inflammatory myopathies, and other inflammatory, granulomatous, degenerative, atrophic disorders, and other disorders such as inflammatory skin diseases including psoriasis and sclerosis, inflammatory bowel diseases (such as Crohn's disease and ulcerative colitis), respiratory distress syndrome (including adult respiratory distress syndrome, ARDS), meningitis, encephalitis, colitis, allergic conditions such as eczema and other conditions involving infiltration of T cells and chronic inflammatory responses, atherosclerosis, leukocyte adhesion deficiency, Reynaud's syndrome, and immune responses associated with acute and delayed hypersensitivity mediated by cytokines and T-lymphocytes typically found in tuberculosis, sarcoidosis, granulomatosis and diseases involving leukocyte diapedesis, central nervous system (CNS) inflammatory disorder, multiple organ injury syndrome, antigen-antibody complex

mediated diseases, anti-glomerular basement membrane disease, Lambert-Eaton myasthenic syndrome, Behcet disease, giant cell arteritis, immune complex nephritis, IgA nephropathy, IgM polyneuropathies or autoimmune thrombocytopenia etc.

58. A method of diagnosing an autoimmune disease or condition associated with an autoimmune disease, comprising contacting the polypeptide of claim 52 with a biological sample, and assaying for binding to said protein; wherein said autoimmune disease is a member selected from the group consisting of: autoimmune hemolytic anemia (including, but not limited to cryoglobulinemia or Coombs positive anemia), autoimmune neonatal thrombocytopenia, idiopathic thrombocytopenia purpura, autoimmunocytopenia, autoimmune neutropenia, hemolytic anemia, antiphospholipid syndrome, dermatitis (e.g. atopic dermatitis), allergic encephalomyelitis, myocarditis, relapsing polychondritis, rheumatic heart disease, glomerulonephritis (e.g. IgA nephropathy), Multiple Sclerosis, Neuritis, Uveitis Ophthalmia, Polyendocrinopathies, Purpura (e.g., Henloch-Schoenlein purpura), Reiter's Disease, Stiff-Man Syndrome, Autoimmune Pulmonary Inflammation, Guillain-Barre Syndrome, insulin dependent diabetes mellitus, juvenile onset diabetes, and autoimmune inflammatory eye, autoimmune thyroiditis, hypothyroidism (i.e., Hashimoto's thyroiditis, systemic lupus erythematosus, Goodpasture's syndrome, Pemphigus, Receptor autoimmunities such as, for example, (a) Graves' Disease, (b) Myasthenia Gravis, and (c) insulin resistance, autoimmune hemolytic anemia, autoimmune thrombocytopenic purpura, rheumatoid arthritis, gluten-sensitive enteropathy, dense deposit disease, scleroderma with anti-collagen antibodies, mixed connective tissue disease, polymyositis/dermatomyositis, pernicious anemia (Addison's disease), idiopathic Addison's disease, infertility, glomerulonephritis such as primary glomerulonephritis and IgA nephropathy, bullous pemphigoid, Sjogren's syndrome, diabetes mellitus, and adrenergic drug resistance (including adrenergic drug resistance with asthma or cystic fibrosis), chronic active hepatitis, primary biliary cirrhosis, other endocrine gland failure, vitiligo, vasculitis, post-MI, cardiomyopathy syndrome, urticaria, atopic dermatitis, asthma, inflammatory myopathies, and other inflammatory, granulomatous, degenerative, atrophic disorders, and other disorders such as inflammatory skin diseases including psoriasis and sclerosis, inflammatory bowel diseases (such as Crohn's disease and ulcerative colitis), respiratory distress syndrome (including adult respiratory distress syndrome, ARDS), meningitis, encephalitis, colitis, allergic conditions

such as eczema and other conditions involving infiltration of T cells and chronic inflammatory responses, atherosclerosis, leukocyte adhesion deficiency, Reynaud's syndrome, and immune responses associated with acute and delayed hypersensitivity mediated by cytokines and T-lymphocytes typically found in tuberculosis, sarcoidosis, granulomatosis and diseases involving leukocyte diapedesis, central nervous system (CNS) inflammatory disorder, multiple organ injury syndrome, antigen-antibody complex mediated diseases, anti-glomerular basement membrane disease, Lambert-Eaton myasthenic syndrome, Beheet disease, giant cell arteritis, immune complex nephritis, IgA nephropathy, IgM polyneuropathies or autoimmune thrombocytopenia etc.

59. A method of treating an autoimmune disease or condition associated with an autoimmune disease comprising, administering an effective amount of the antibody of claim 54, to a patient in need thereof; wherein said autoimmune disease is a member selected from the group consisting of: autoimmune hemolytic anemia (including, but not limited to cryoglobulinemia or Coombs positive anemia), autoimmune neonatal thrombocytopenia, idiopathic thrombocytopenia purpura, autoimmunocytopenia, autoimmune neutropenia, hemolytic anemia, antiphospholipid syndrome, dermatitis (e.g. atopic dermatitis), allergic encephalomyelitis, myocarditis, relapsing polychondritis, rheumatic heart disease, glomerulonephritis (e.g. IgA nephropathy), Multiple Sclerosis, Neuritis, Uveitis Ophthalmia, Polyendocrinopathies, Purpura (e.g., Henloch-Scoenlein purpura), Reiter's Disease, Stiff-Man Syndrome, Autoimmune Pulmonary Inflammation, Guillain-Barre Syndrome, insulin dependent diabetes mellitus, juvenile onset diabetes, and autoimmune inflammatory eye, autoimmune thyroiditis, hypothyroidism (i.e., Hashimoto's thyroiditis, systemic lupus erythematosus, Goodpasture's syndrome, Pemphigus, Receptor autoimmunities such as, for example, (a) Graves' Disease , (b) Myasthenia Gravis, and (c) insulin resistance, autoimmune hemolytic anemia, autoimmune thrombocytopenic purpura , rheumatoid arthritis, gluten-sensitive enteropathy, dense deposit disease, scleroderma with anti-collagen antibodies, mixed connective tissue disease, polymyositis/dermatomyositis, pernicious anemia (Addison's disease), idiopathic Addison's disease, infertility, glomerulonephritis such as primary glomerulonephritis and IgA nephropathy, bullous pemphigoid, Sjogren's syndrome, diabetes mellitus, and adrenergic drug resistance (including adrenergic drug resistance with asthma or cystic fibrosis), chronic active hepatitis, primary biliary cirrhosis, other

endocrine gland failure, vitiligo, vasculitis, post-MI, cardiomyopathy syndrome, urticaria, atopic dermatitis, asthma, inflammatory myopathies, and other inflammatory, granulomatous, degenerative, atrophic disorders, and other disorders such as inflammatory skin diseases including psoriasis and sclerosis, inflammatory bowel diseases (such as Crohn's disease and ulcerative colitis), respiratory distress syndrome (including adult respiratory distress syndrome, ARDS), meningitis, encephalitis, colitis, allergic conditions such as eczema and other conditions involving infiltration of T cells and chronic inflammatory responses, atherosclerosis, leukocyte adhesion deficiency, Reynaud's syndrome, and immune responses associated with acute and delayed hypersensitivity mediated by cytokines and T-lymphocytes typically found in tuberculosis, sarcoidosis, granulomatosis and diseases involving leukocyte diapedesis, central nervous system (CNS) inflammatory disorder, multiple organ injury syndrome, antigen-antibody complex mediated diseases, anti-glomerular basement membrane disease, Lambert-Eaton myasthenic syndrome, Behcet disease, giant cell arteritis, immune complex nephritis, IgA nephropathy, IgM polyneuropathies or autoimmune thrombocytopenia etc.

60. A method of diagnosing an autoimmune disease or condition associated with an autoimmune disease, comprising contacting the antibody of claim 54 with a biological sample, and assaying for binding to said antibody, wherein said autoimmune disease is a member selected from the group consisting of: autoimmune hemolytic anemia (including, but not limited to cryoglobulinemia or Coombs positive anemia), autoimmune neonatal thrombocytopenia, idiopathic thrombocytopenia purpura, autoimmunocytopenia, autoimmune neutropenia, hemolytic anemia, antiphospholipid syndrome, dermatitis (e.g. atopic dermatitis), allergic encephalomyelitis, myocarditis, relapsing polychondritis, rheumatic heart disease, glomerulonephritis (e.g. IgA nephropathy), Multiple Sclerosis, Neuritis, Uveitis Ophthalmia, Polyendocrinopathies, Purpura (e.g., Henoch-Schoenlein purpura), Reiter's Disease, Stiff-Man Syndrome, Autoimmune Pulmonary Inflammation, Guillain-Barre Syndrome, insulin dependent diabetes mellitus, juvenile onset diabetes, and autoimmune inflammatory eye, autoimmune thyroiditis, hypothyroidism (i.e., Hashimoto's thyroiditis, systemic lupus erythematosus, Goodpasture's syndrome, Pemphigus, Receptor autoimmunities such as, for example, (a) Graves' Disease, (b) Myasthenia Gravis, and (c) insulin resistance, autoimmune hemolytic anemia, autoimmune thrombocytopenic purpura, rheumatoid arthritis, gluten-sensitive

enteropathy, dense deposit disease, scleroderma with anti-collagen antibodies, mixed connective tissue disease, polymyositis/dermatomyositis, pernicious anemia (Addison's disease), idiopathic Addison's disease, infertility, glomerulonephritis such as primary glomerulonephritis and IgA nephropathy, bullous pemphigoid, Sjogren's syndrome, diabetes mellitus, and adrenergic drug resistance (including adrenergic drug resistance with asthma or cystic fibrosis), chronic active hepatitis, primary biliary cirrhosis, other endocrine gland failure, vitiligo, vasculitis, post-MI, cardiomyopathy syndrome, urticaria, atopic dermatitis, asthma, inflammatory myopathies, and other inflammatory, granulomatous, degenerative, atrophic disorders, and other disorders such as inflammatory skin diseases including psoriasis and sclerosis, inflammatory bowel diseases (such as Crohn's disease and ulcerative colitis), respiratory distress syndrome (including adult respiratory distress syndrome, ARDS), meningitis, encephalitis, colitis, allergic conditions such as eczema and other conditions involving infiltration of T cells and chronic inflammatory responses, atherosclerosis, leukocyte adhesion deficiency, Reynaud's syndrome, and immune responses associated with acute and delayed hypersensitivity mediated by cytokines and T-lymphocytes typically found in tuberculosis, sarcoidosis, granulomatosis and diseases involving leukocyte diapedesis, central nervous system (CNS) inflammatory disorder, multiple organ injury syndrome, antigen-antibody complex mediated diseases, anti-glomerular basement membrane disease, Lambert-Eaton myasthenic syndrome, Behcet disease, giant cell arteritis, immune complex nephritis, IgA nephropathy, IgM polyneuropathies or autoimmune thrombocytopenia etc.

61. A method of increasing B cell proliferation, comprising administering an effective amount of the antibody of claim 54, to a patient in need thereof.

62. A method of increasing immunoglobulin production, comprising administering an effective amount of the antibody of claim 54, to a patient in need thereof.

63. A method of inhibiting B cell proliferation, comprising administering an effective amount of the polypeptide of claim 52 or the antibody of claim 54 to a patient in need thereof.

64. A method of inhibiting immunoglobulin production, comprising

administering an effective amount of the polypeptide of claim 52 or the antibody of claim 54, to a patient in need thereof.